What is claimed is:

1. A method for aluminum residue ash recycling utilization, comprising steps of:

a. taking aluminum residue ash as raw material;

b. implementing high temperature calcination and stabilization;

c. manufacturing the raw material for fireproof materials.

2. The method for aluminum residue ash recycling utilization as claimed in claim 1, wherein the temperature for calcination ranges from 800°C to 1800°C.

3. The method for aluminum residue ash recycling utilization as claimed in claim 1, wherein aluminum nitride (AlN) and aluminum carbide (Al_4C_3) are utilized to influence stabilization of the high temperature calcination method.

4. The method for aluminum residue ash recycling utilization as claimed in claim 1, wherein α aluminum oxide ($\alpha - Al_2O_3$) is the raw material of the fire-proof materials.

5. The method for aluminum residue ash recycling utilization as claimed in claim 1, further comprising steps of:

d. grinding the α aluminum oxide (α - Al_2O_3);

e. adding admixture, such as a binding agent, a porous forming agent,

a fluxing agent, a stabilizing agent...etc.;

f. mixing and refine;

g. molding the ceramic filter medium into an embryo shape;

h. drying the ceramic filter medium embryo shape;

i. sintering;

j. Lowering temperature;

k. Completing finished product.

6. The method for aluminum residue ash recycling utilization as claimed in claim 5, wherein the binding agent of the admixture is black clay, the porous forming agent is charcoal dust, the fluxing agent is feldspar, the stabilizing agent is zirconium silicate, with preferred proportions of each raw material being: 74.8% aluminum residue ash, 9.4% black clay, 4.7% charcoal dust, 5.6% feldspar, 1.8% zirconium silicate, and 3.7% sintered steatite.

7. The method for aluminum residue ash recycling utilization as claimed in claim 5, wherein the α aluminum oxide is ground to a grain size between 250 mesh and 800 mesh.